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Contact: Kevin Hardy

### **University Researchers Provide Glimpse Of Louisiana's Future At Capitol**

Researchers and students representing Louisiana's nine-university *Consortium for Micro-Nano Technologies for Advanced Physical, Chemical and Biological Sensors* this week provided state lawmakers with an exciting glimpse into Louisiana's technological and economic future.

"Capitol Day," hosted on April 20 in the Capitol Rotunda by the Board of Regents' Experimental Program To Stimulate Competitive Research (Louisiana EPSCoR), featured displays and hands-on exhibits illustrative of the Consortium's wide-ranging research into the virtually limitless possibilities of micro- and nano-technology, the science of manufacturing microscopic devices with applications in fields as diverse as medicine, manufacturing and national defense. The Consortium is funded jointly by the National Science Foundation and the Board of Regents.

Faculty and student researchers, as well as some industry representatives, used static displays, videos, computer simulation, hands-on demonstrations, and even an actual human brain to acquaint a steady stream of lawmakers and Capitol visitors with their cutting-edge research.

"The implications and potential of the Consortium's research are far reaching," said Louisiana EPSCoR Director Michael Khonsari. "The Consortium's goal is to establish a world-class research infrastructure that will promote Louisiana's considerable research capabilities and stimulate our economic competitiveness through the development of micro-and nano-scale systems for chemical, biomedical and other commercial applications."

To date, Consortium researchers have earned four patents, with another 13 pending.

The Consortium's Nanomaterials Team, which includes researchers from LSU A&M, Louisiana Tech, Southern University A&M, Tulane and UNO, is conducting research in several areas which have important implications in biotechnology and hold real promise for commercial applications.

The Microfabrication Team, composed of researchers from Louisiana Tech, Grambling, Tulane, the University of Louisiana at Monroe, UNO, Xavier and LSU's J. Bennett Johnston Center for Advanced Microstructures and Devices (CAMD), has focused its research on developing micro- and nano-fabrication techniques that will contribute to the growing need for sound manufacturing technologies.

## Capitol Day

### ADD ONE

The Neural Signaling Team includes researchers from LSU Health Sciences Center - New Orleans and Xavier University. The team is engaged in research focused on Alzheimer's disease and memory, and the potentially-blinding maladies of macular degeneration and retinitis pigmentosa.

Among the many advancements made by the Consortium's research are new drugs with strong potential for fighting blinding eye diseases and smoking addiction and for relieving pain without side effects; the capability to produce microscopic analytical instruments that can be used to detect specific chemicals; the ability to monitor biochemical processes as they occur without altering the process; and the identification of a protein deficiency that may contribute to the development of Alzheimer's and Parkinson's disease. The research has also led to the development of several Louisiana-based companies, including a pharmaceutical company, poised to take the Consortium's technology to market.

Also featured at the event was the work of Louisiana university researchers associated with the newly-formed Center for Biomolecular Microsystems, who, for the first time, have used "smart" nano- and micro-scopic polymers, such as plastics, to fabricate microsystems capable of detecting the presence of disease as well as harmful environmental factors.

The Capitol Rotunda event was followed in the evening by a reception at the Governor's Mansion, attended by state lawmakers, event participants, campus representatives, members of the Louisiana Board of Regents and Governor Kathleen Blanco.

"I applaud you for the exciting work you are doing," Governor Blanco told Consortium representatives at the reception. "Your research directly supports the economic development objectives of Vision 2020. The wonderful discoveries you've made, the technologies you've developed and the transfer of that technology to new business ventures have tremendous economic potential for our state. And I look forward to even more exciting discoveries in the future."

"You have forged productive, long-term partnerships that will continue to pay dividends well into the future. The patents you have received and the technological know-how you put into practice day in and day out are having a meaningful impact on Louisiana. The devices and technology you're developing are helping to bring Louisiana to the forefront of technological progress in a variety of disciplines. Congratulations on all your success," said Commissioner of Higher Education Joseph Savoie, also on hand for the event and reception.